

# Work Order ID 60103

Thursday, June 24, 2010 10:34:53 AM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

*H*

Date: *10-6-24*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2580	Rev D								
100		0.00							
	DOCUMENT CONTROL								
DC	Memo	0.00							
Document Control	Photocopy D205-634 bluefile & type labels per PPP D205-634-041		CHG002						
110		0.00							
	BENDING MACHINE - SKIDTUBES								
CNC Bend 1	Memo	0.00							
CNC Delta 100 Bender	1-Bend as per program D2580.C on CNC Bender and Folio 16								
	2-Cut tubes as per Dwg. D2580								
	3- scribe batch# in aft end of tube								

*N/A*  
*into w/o 59283*

*M 10/7/11*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
Skidtubes	Memo	0.00							
Skidtubes	1- Deburr ends								
	2- C'sink holes as per dwg without cutting fluid								
	3- Prepare tube for welding, remove alodine as required.								
	4- Scribe batch number insied aft end of tube.								
130	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

11

BE10/07/01

81067105

60

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R□□□ Aluminum Rod

M114242

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R□□□ Aluminum Rod

M114242

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",  
adjust stopper not to hit web. Debur5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580.  
Debur holes

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Debur

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Debur

X1

BE 10/07/06

W/O:		WORK ORDER CHANGES						
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[illegible]

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**Accept**

[illegible]**Setup Start**

\_\_\_\_\_

**Stop**

[illegible]**Cust Item ID:**

10/10/2012 11:56:11 AM  
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11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 10

**Customer:**

Run Start

**Stop**

**Abstract**

**Insp.  
Stamp**

0.00



QC

## Quality Control

## Memo

0.00

Solution

0.00

**00000000000000000000**

QC

## Quality Control

## Memo

0.00

8/10/21/24



0.00



### HandFinish

## Hand Finishing

## Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.



BR 10-7-7.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



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Item ID: D205-634-041

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Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 6/24/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

M114841

Memo

0.00

Powder Coating

START TIME: 9:00

OVEN TEMPERATURE: 320°

FINISH TIME: 9:30

1 BL 10-7-8.

190

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

M 10107108

1 ✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

200

0.00



HandFinish

Memo

0.00

Hand Finishing

794 10/07/13

x1 0

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R ☐ ☐ ☐ Sikaflex-291 ☐ M113519

Sikaflex expire date: 10/14

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291 ☐ M113519

Sikaflex expire date: 10/14

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: M114432

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Cust Item ID:

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024	0.00  0.00							
220  Packaging Packaging Packaging	Packaging  Memo Identify and pack for shipping as per PPPD205-634-041 Location: _____ PPP Rev: <u>PPPS9283</u>	0.00  0.00							
230  QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00							

W/O:		WORK ORDER CHANGES					
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Work Order ID: 60103

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010


Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00


Comments: IPP Rev:N02.08.28FP was QC5 in Step 27; Added QC5 to Step 30KJ  
 IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD  
 IPP Rev. O 06.02.28 Added paperwork EC  
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2580-1		Manufactured	No			110	Each	5.0000	1	1			
													
205 Skidtube bent detail													


Location	Loc Qty	Loc Code
LG	5	
57028	1	
59297	2	
59299	2	

B59299 D M D/7/1

D2576-3		Manufactured	No			140	Each	92.0000	1	1			
													
Step (maching detail)													

Location	Loc Qty	Loc Code
LG	92	
46661	44	
52215	48	

1 BE 10/07/06

D2579		Manufactured	No			140	Each	353.0000	20	20			
													
Crossbolt Spacer													

Location	Loc Qty	Loc Code
LG	353	
57052	5	
57348	4	
58433	54	
59113	290	

20 BE 10/07/06

W/O:		WORK ORDER CHANGES					
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Work Order ID: 60103

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

D2855

Manufactured No

200

Each

86.0000

1

1



Cap



Location

Loc Qty

Loc Code

FP6

2

56613

2

ST026

84

50513

1

50770

28

51539

2

53791

53

AN3-5A

Purchased

No

200

Each

1,303.000

2

2



Bolt



Location

Loc Qty

Loc Code

ST350

1303

105057

803

115016

500

AN960JD10L

NAS1149D0332J

Purchased

No

200

Each

3,437.000

2

2



Washer



Location

Loc Qty

Loc Code

ST348

3437

110985

3437

ALS7-1032-130

Purchased

No

200

Each

17.0000

50

50



Insert



Location

Loc Qty

Loc Code

ST282

17

113238

17

11114723

X50 10/07/08

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Shop Packet Print

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Work Order ID: 60103

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No 200 Each 2,259.000 50 50



BOLT



Location Loc Qty Loc Code

ST350 2259  
114103 501  
114108 14  
114416 12  
114523 2  
114859 730  
114941 1000

x50 48 10/01/08

AN960C10L Purchased No

NAS1149C0332



washer

D3566-13 Manufactured No



Gasket

200 Each 0.0000 50 50

M115000



x50 48 10/07/08

Location Loc Qty Loc Code

FP 14 B57922  
14

x1 48 10/07/08

D3566-5 Manufactured No



Gasket

200 Each 24.0000 1 1



Location Loc Qty Loc Code

FP015 24  
57682 2  
59158 22

x1 48 10/07/08

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Shop Packet Print

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Work Order ID: 60103

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

D3566-1 Manufactured No 200 Each 25.0000 2 2  
Gasket

Location	Loc Qty	Loc Code
FP015	25	
57715	2	
58182	1	
59126	22	

x2 M 10/07/08

D3564-11 Manufactured No 200 Each 1.0000 1 1  
Wearshoe

Location	Loc Qty	Loc Code
FP019	1	
59021	1	

B59941

x1 M 10/07/08

D3564-13 Manufactured No 200 Each 8.0000 1 1  
Wearshoe

Location	Loc Qty	Loc Code
FP17	8	
57922	8	

x1 M 10/07/08

D3564-9 Manufactured No 200 Each 16.0000 1 1  
Wearshoe

Location	Loc Qty	Loc Code
FP	1	
55334	1	
FP019	15	
57958	2	
59201	13	

x1 M 10/07/08

Thursday, June 24, 2010 10:35:00 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, June 24, 2010 10:35:00 AM

Page 5 / 5

Work Order ID: 60103

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

D3564-5

Manufactured No

200

Each

22.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FG

1

34806

1

FP19

9

57525

1

58709

8

FP-19

12

59157

12

V1 M 10/07/08

D2594-3

Manufactured No

200

Each

539.0000

16

16



O-Ring, 205 Skidtube

Location

Loc Qty

Loc Code

FP

539

55546

19

58191

28

59358

492

X16 M 10/07/08

D2594-1

Manufactured No

200

Each

499.0000

16

16



Plug, 205 Skidtube

Location

Loc Qty

Loc Code

FP

190

42807

112

55002

71

57826

7

FP14

309

58434

120

59110

189

X16 M 10/07/08

Thursday, June 24, 2010 10:35:00 AM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**DART**

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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07-06-28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 60103  
*[Signature]*

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W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Diagram illustrating the underside of the component, showing the locations for grinding and the location ridge on the underside of D2576. The diagram includes labels for:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576

Diagram illustrating the rear view of the engine cover assembly. The diagram shows the following components and dimensions:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)**: Indicated by two small circles on the cover.
- AN3-5A BOLT (1)**: A bolt passing through the center of the cover.
- AN960/D10L WASHER (1)**: A washer located between the bolt and the cover.
- D2855 CAP**: The cap being installed on the rear of the cover.
- SEAL WITH SIKAFLEX-241/-291**: A sealant applied to the joint between the cover and the cap.
- 0.40**: A dimension indicating the distance from the center of the bolt to the edge of the cover.

D2579 SPACER

D2596 WEB (REF)

ALS7-1032-130 (REF)  
(TYP 50 PLACES)

C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 P'ACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

37.50

DISTANCE TO AFT END OF D2596 WEB

3

7

1.750

1.750

#0.508 (TYP.) (40 PLACES)

REFER TO DETAIL A

8.750

17.375

26.000

34.188

57.313 (REF)

7 EQUAL SPACES

8.188 PITCH

38.0

91.500

190.0

(D2500-1)

0.5 1.5 1.5 D

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

WELD AS PER DETAIL B

8

P P P P P P P

REFER TO DETAIL C

D3566-1 D3566-5 D3566-1 D3566-13

D3564-11 D3564-5 D3564-9 D3564-13

AN3C4A BOLT (1)  
AN560C10L WASHER (1)  
(50 PLACES)

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DESIGN	<i>[Signature]</i>	DRAWN BY	<i>PH</i>
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
DATE			
07.02.27			

DRAWING NO.	REV. D
D2580	SHEET 2 OF 3
TITLE	SCALE
205 SKIDTUBE ASSEMBLY	1:24

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		

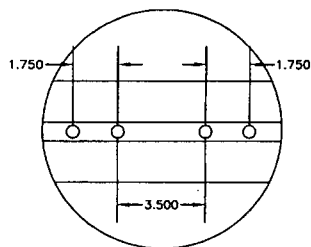
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

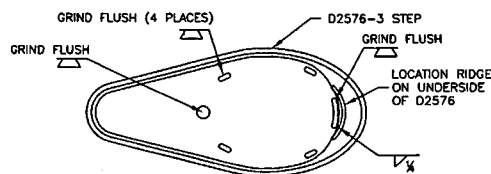
NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

**NOTE:** Date & initial all entries

**DETAIL E**  
SCALE 5:24

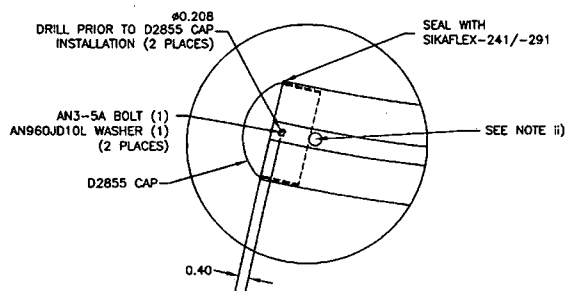


**DETAIL F**  
SCALE 5:24

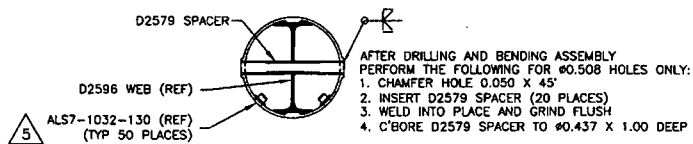


**RELEASED**  
07 Dec 28

**DETAIL G**  
SCALE 5:24



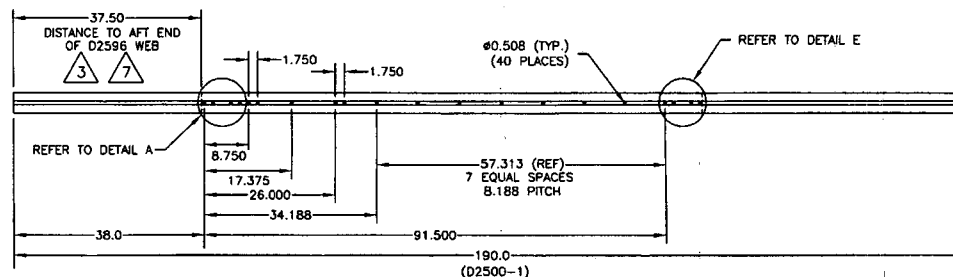
**SECTION H-H**  
SCALE 5:24



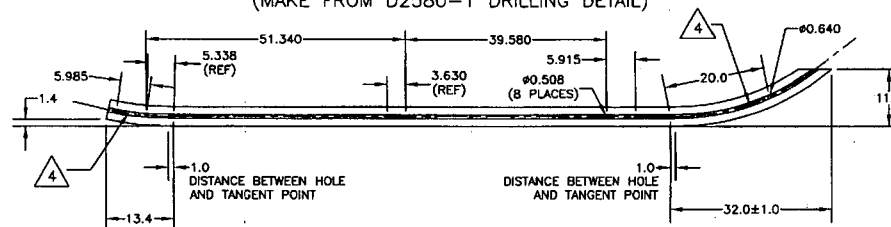
**D2580-045 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

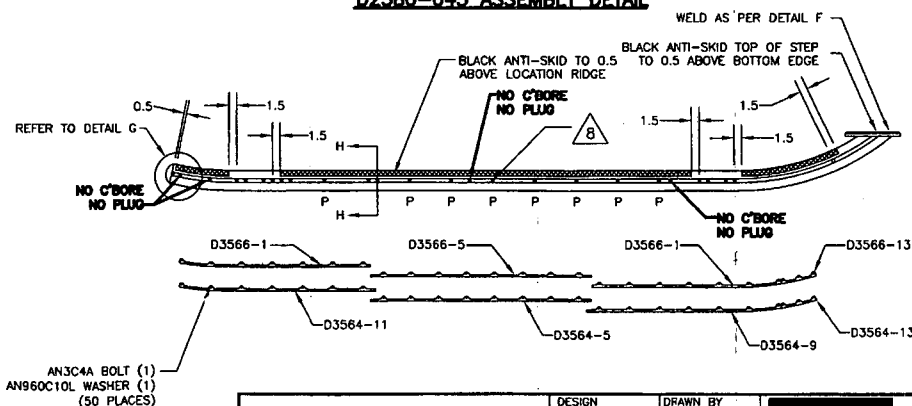
**D2580-1 DRILLING DETAIL**



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



**D2580-045 ASSEMBLY DETAIL**



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DESIGN RH	DRAWN BY RH	<b>DART</b>	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED H	APPROVED H	DRAWING NO. D2580	REV. 0 SHEET 3 OF 3
DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24	

60103

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 232

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 59105  
Part number: D205-634-041  
Description: 205 skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat. Dunn Date of Test Coupon 10.06.01  
Welder Barclay Elliott Date of Test Coupon 10.06.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld